

Transmission Cost Allocation Issues And a Proposal

Implementation of LMP ASAP is imperative to New England. It will restore the energy price signal to respond to transmission congestion that was lost when the Restated NEPOOL Agreement went into effect. Whatever its role in the past, the practice of rolled in transmission pricing in New England must not be applied to incremental facilities once LMP goes into effect. Any proposal to socialize incremental transmission costs will delay – not hasten -- the construction of new transmission facilities, and is directly at odds with the new locational pricing system that we have all worked long and hard to achieve. If both approaches are implemented simultaneously, neither will work appropriately.

THE SYSTEM OF COOPERATIVE PLANNING AND COST SHARING FOR TRANSMISSION EXPANSION IN NEW ENGLAND WAS DESIGNED FOR, AND OPERATED IN, CONDITIONS THAT NO LONGER EXIST

The New England Power Pool (NEPOOL) has a long history of cooperative development and cost sharing¹ for transmission projects. This cooperation evolved over time as relatively small, vertically integrated utilities attempted to meet the needs of their customers at the lowest cost using all of the remedies and economies available in a vertically integrated structure. The structure that made this cooperation desirable and possible in the past, however, has changed dramatically over the last six years. Those structural changes require the abandonment of cost allocation approaches that, while they may have worked well in the past, are fundamentally inconsistent with the new market structures.

Cooperative ventures among utilities in New England have a long history. New England IOUs participated as joint owners of the Yankee nuclear units and of large fossil units when they were built. In order to share the low cost energy generated by these units, they also agreed to share many (though not all) transmission costs. The MEPCO line was built in order for several utilities to acquire low cost energy from New Brunswick Power. Later, the HQ Phase II facility was built to gain access to low cost energy from Hydro-Quebec. In each instance, the transmission projects provided access to lower cost energy for utility customers, so the affected utilities cooperated on the development and funding of the projects. Regulators approved expenditures on such projects because utilities demonstrated that the financial benefit to customers exceeded the costs they would have to pay. Contrary to some assertions made today, the transmission facilities of the pool were never built without a demonstration that those paying for them would directly and demonstrably benefit from the upgrade or expansion.

This cooperatively developed and funded transmission system allowed NEPOOL to share in lower energy costs. Structured as a “tight power pool,” NEPOOL used a

¹ Cooperatively sharing costs is not the same as forced socialization of them being imposed on non-beneficiaries

single, common economic dispatch center to dispatch all generation in the region. By dispatching the lowest cost generation available to meet the load, the New England Power Exchange (NEPEX) was able to lower the total cost of serving New England load. Economies from operating the system in this way were directed to a “Savings Fund,” and allocated to individual NEPOOL utilities as “Savings Shares.” Savings shares were determined by comparing the total cost of each utility using its own generation to serve its own load to the cost of dispatching the most economic generation in the pool to serve the load. Utilities with low cost generation whose generators ran more than they would have under “Own Load” dispatch were compensated for their operation. The system for sharing the benefits of low cost generation across the region were a primary justification for sharing the costs of the transmission system built to allow relatively unconstrained dispatch. The history of joint economic dispatch and cooperation also made possible the development of the nation’s only “postage stamp” transmission rate. The Regional Network Agreement (RNA) was a negotiated network transmission rate that recovers the bulk transmission system revenue requirements for seven separate utilities through a single rate.

Congestion costs existed, but they were borne locally and were an important consideration for utilities and their regulators in deciding whether to build transmission where it was needed. In transmission constrained “load pockets” the operation of high cost “Reliability Must Run” generation was reflected in the host utility’s Own Load dispatch modeling and in the power pool’s system dispatch algorithm. The result was that the cost of congestion was imposed squarely upon load located within the transmission constrained region. The economic factors in the decision of whether to build transmission to relieve the constraint and gain access to lower cost generation were fully internalized within the vertical utility structure in place at the time. Utilities and regulators were able to make rational economic decisions about whether and how² they should relieve the constraints. Likewise, the cost of building transmission to alleviate this congestion was borne by the local utility and its customers, not socialized among the NEPOOL members. Projects with multiple beneficiaries may negotiate joint support or partnership agreements similar to those developed for projects such as the Maine Electric Power Company line and the Hydro-Quebec Phase II project.

The world in which the benefits of generation cost saving, and the burdens of transmission costs to achieve those savings, however, no longer exists. In 1992, the EPACT allowed EWGs to compete in wholesale electric markets at market based rates and granted them access to the transmission grids on the same terms as the utilities that owned the facilities. In 1996 NEPOOL filed a comprehensive proposal to restructure the NEPOOL agreement³. That proposal allowed for the socialization of congestion costs, and was approved by the FERC in 1998⁴. FERC allowed socializing as an interim measure until NEPOOL could develop a Congestion Management System (CMS) and because it believed that the congestion charges “should be small and predictable because

² Vertically integrated companies could choose the least cost solution among load response, generation, or transmission solutions.

³ Docket No. OA97-237-000

⁴ *New England Power Pool*, 83 FERC P. 61,045 at 61,237 (1998)

there are presently no known internal constraints in NEPOOL⁵.” Also beginning in 1996, New England states adopted laws to restructure their retail markets. As part of this restructuring, utilities sold their generating facilities. Virtually all generation in New England⁶ is now owned by companies competing at market based rates. They access the grid through a bid based system dispatch, and they have no obligation to “native” loads. Transmission-only utilities that remain have no responsibility to reduce energy cost as they did when they were vertically integrated. There is still, nevertheless, a transient justification for socializing transmission costs, because under existing (pre-LMP) market rules the costs of congestion are shared, as are the benefits (to the extent achievable) of low cost generation wherever located. As demonstrated below, however, any residual justification for socializing transmission upgrade costs disappears with the introduction of locational marginal pricing in the energy market.

SOCIALIZING TRANSMISSION COSTS IS FUNDAMENTALLY INCONSISTENT WITH LMP

In bid based competitive markets, LMP conveys price signals that are intended to elicit market responses – either through changed consumption behavior, new generation, or transmission system upgrades (merchant or regulated). Generation companies bear the risk that their bids will be too high and that they may not be selected to run, or that new entrants will displace them in the market. Consumers⁷ should be spurred to action by the prices, and should have the freedom to choose from a number of competing alternatives that remedy the problem. Decisions to invest in alternative remedies to extra-market prices by consumers also involve risk⁸. Region-wide transmission planning, if combined with socialization of the cost of transmission found to be "needed," will disastrously deter investment in any non-transmission solution.

- Inefficient generators operating at high cost within a load pocket will not invest to upgrade plants because competition from lower cost generation outside the load pocket will be brought in as competition and they will receive no returns from their investment.
- Consumers will not make significant commitments to alternative technologies with long term paybacks because of the possibility that the return on their investment will be ruined through a socialized transmission project.
- Load servers will not start any innovative pricing programs or invest in real-time metering technologies if they perceive that a socialized solution will reduce prices.
- New generators will be reluctant to develop projects in such a region because prices can soon be expected to fall.

⁵ *Id.*

⁶ Also in New York

⁷ Load servers who buy at wholesale will translate wholesale market prices into retail prices, and may do so in a variety of ways.

⁸ E.g. technology risks, assumptions about future generation bid behavior, about generation fuel prices, or alternative fuel prices, e.t.c.

- Transmission providers assured of cost recovery on transmission projects will work to delay the market responses.

In a competitive market, the Commission must ensure that centrally planned transmission projects are accompanied with mechanisms that allocate the project costs according to the perceived benefits. The ITP can develop procedures to facilitate voluntary project financing and allow those who will bear the increased costs or reduced reliability to decide whether the planning results are sufficient to warrant investment in the proposed solution. This will restore the same standard that was in place before the socialization of congestion costs. Once again, prices will provide incentives to an investigation of alternatives for load interests, and once again state regulators will be able to work with their jurisdictional utilities to determine whether the benefits of such projects exceed their costs. Paying for projects in any other way will harm the competitive process, impoverish those who are bystanders, and enrich those who are beneficiaries.

SOCIALIZING TRANSMISSION UPGRADE AND EXPANSION COSTS UNDER LMP WILL DELAY – NOT HASTEN -- THE CONSTRUCTION OF NEW FACILITIES.

The new market rules, when combined with efforts to socialize transmission costs, create incentives for utilities and political bodies to resist transmission expansion. LMP returns the cost of congestion to its rightful owners - the consumers who cause them⁹. When congestion is relieved through transmission upgrades, these consumers alone benefit from lower prices while prices in proximate nodes or zones will increase. There is no mechanism available to share the relief, and no mechanism for creating “Savings Shares” as was done in New England in the past. Merchant generators will use revenues in excess of marginal costs to reduce fixed costs and are not likely to “split the savings” as regulated companies once did voluntarily. Since these savings will no longer be shared with them, public utility commissions and siting councils in states where the transmission will be constructed, but where the new lines will not provide access to lower priced generation, will almost certainly resist issuing permits as there will be no benefit and only increased costs for their consumers. Even transmission utilities are likely to resist expansion projects if the result of those projects is to raise rates and thereby depress sales in their service areas.

Some cost socialization proposals may also create an incentive for delay by the public utility commission whose customers will benefit. Under prior NEPOOL proposals, needed transmission expansions could be either funded voluntarily by those who would benefit or, barring volunteerism project costs would be socialized – why should regulators who are so situated rush to build anything? The only way to accelerate transmission expansion in this environment is for FERC to make it clear that those who benefit from the expansion will pay for it. Utilities whose transmission facilities are constrained should expect favorable regulatory treatment and support from regulators in whose jurisdiction the constraint occurs if they propose to resolve the problem.

⁹ This merely restores the incentive that was lost when these costs were socialized.

THE COMMISSION SHOULD ADOPT A COST ALLOCATION PROCESS THAT MATCHES THE COSTS TO THE BENEFITS

Work is already underway to develop a planning process and cost allocation process that is compatible with LMP. The Regional Transmission Expansion Planning process that ISO New England has initiated is an initial step towards what could develop into a sound cost allocation proposal. The planning process continuously identifies problems and evaluates a wide range of solutions in a comprehensive and integrated manner. At the conclusion of the annual process, a report is produced that includes the ISO's recommendations for remedying problems that have been identified. The process is open to all, and opportunities for input are available through the Transmission Expansion Advisory Committee. The "Projected Congestion Cost Analysis," in Section 7 of the report, gives a reference case that projects sub-area congestion costs without any transmission projects. From the reference case, the amount of benefit to each sub-region from various projects can then be calculated, and project costs can be apportioned accordingly. Naturally, as the ISO has noted, this type of scenario analysis necessarily relies on multiple assumptions that are imprecise by nature, but it will align the costs of projects to the beneficiaries more fairly and more consistently with the principles of LMP than the pro-rata apportionment produced by socialization.

This is not to suggest that NONE of the costs of new transmission should be socialized. It may be appropriate to socialize ten percent of a project's cost to the rest of a region. There is little doubt, for example, that there are regional reliability benefits from any major project. Moreover, assigning ten percent to the region as a whole reduces the likelihood that the "cost causation" analysis is intolerably imprecise. Regulators frequently make cost allocation decisions in rate design cases, and we are aware that cost allocation is imprecise by nature. It is important for the FERC to understand that it will soon have to rule on any transmission projects that are funded in this manner, but the determination of whether the rates that recover the expenditures are "just and reasonable" will be made easier, rather than more difficult, if the costs are allocated in this manner instead of socialized.

Finally, it would be reasonable to create a trigger mechanism¹⁰ that allows the costs to be reallocated if there is a discrete change in the use of the system that provides quantifiable benefits to those left out of the initial recovery scheme.

¹⁰ This could be a formal trigger, or could be a 206 filing